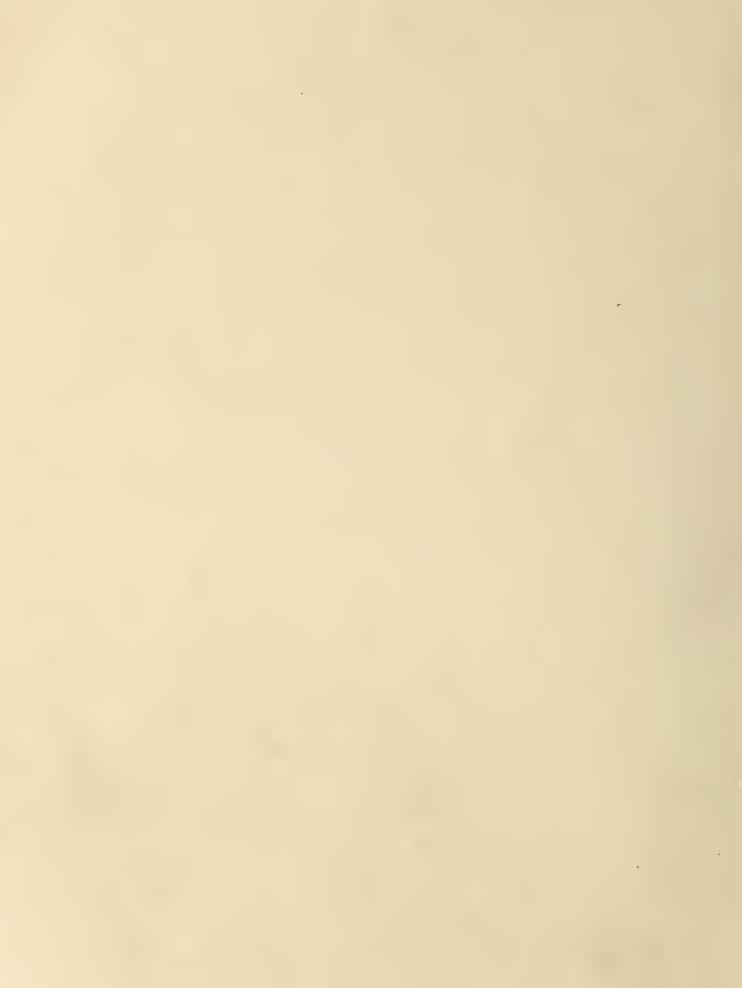
## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



# R31Fsm Cop. 2 WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO



## U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERV

COLORADO STATE UNIVERSITY EXPERIMENT STATION

COLORADO MAR I. 1974 and STATE ENGINEER of NEW MEXICO

MAR. 1, 1974 [[]]

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

#### TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover Photo: Snow Surveyors near Ship Creek, Alaska snow course.

#### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 841 38
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

#### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and tor British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

## WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

#### KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

M. D. BURDICK

STATE CONSERVATIONIST SOIL CONSERVATION SERVICE DENVER, COLORADO MARION E. STRONG

STATE CONSERVATIONIST SOIL CONSERVATION SERVICE ALBUQUERQUE, NEW MEXICO

In Cooperation with

JOHN PATRICK JORDAN

DIRECTOR C S U EXPERIMENT STATION S. E. REYNOLDS

STATE ENGINEER STATE OF NEW MEXICO

C. J. KUIPER

STATE ENGINEER STATE OF COLORADO

Report prepared by

JACK N. WASHICHEK, Snow Survey Supervisor and

RONALD E. MORELAND, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE SNOW SURVEY UNIT P.O. BOX 17107 DENVER, COLORADO 80217

#### TABLE OF CONTENTS

#### WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

#### WATERSHED I - SOUTH PLATTE RIVER WATERSHED

Describes woter supply conditions in Fort Collins, Big Thompson, Longmont, Boulder Valley, Jefferson, Teller-Pork, Douglas County, Morgan, Kiowo, West Arapahoe, West Adams, East Adams, Plotte Volley, Southeast Weld, and West Greeley Soil Conservation Districts.

#### WATERSHED II - ARKANSAS RIVER WATERSHED

Describes water supply conditions in Lake County, Upper Arkansas, Fremont, Custer County Divide, Fountain Volley, Black Squirrel, Horse-Rush Creek, Central Colorado, Turkey Creek, Pueblo, Bessemer, Olney Boone, Cheyenne, Upper Huerfano, Stonewoll, Spanish Peaks, Purgatoire, Bronson Trinchera, Western Baca, Southeastern Baca, Two Buttes, Bent, Timpas, Northeast Prowers, Prowers, Kiowa County, West Otero, East Otero, and Big Sandy Soil Conservation Districts.

#### WATERSHED III -RIO GRANDE WATERSHED (COLORADO)

Describes water supply conditions in Rio Grande, Center, Conejos, Mosca Hooper, Mt. Blanca, Sanchez, and Culebra Soil Conservation Districts.

#### WATERSHED IV - RIO GRANDE WATERSHED (NEW MEXICO)

Describes wa ter supply conditions in Upper Chama, East Rio Arriba, Taos, Lindrith, Jemez, Santa Fe – Pojoaque, Sandoval, Tijeras, Cuba, and Edgewood Soil Conservation Districts.

#### WATERSHED V - DOLORES, SAN JUAN, AND ANIMAS RIVERS WATERSHED

Describes water supply conditions in San Miguel Basin. Dove Creek, Dolores, Mancos, LaPlata, Pine River, San Juan, San Miguel Basin, and Glade Park Soil Conservation Districts.

#### WATERSHED VI - GUNNISON RIVER WATERSHED

Describes water supply conditions in Delta, Gunnison, Cimarron, Shavano, and Uncompangre Soil Conservation Districts.

#### WATERSHED VII - COLORADO RIVER WATERSHED

Describes water supply conditions in DeBeque, Plateau Valley, Lower Grand Valley, Bookcliff, Eagle County, Middle Park, Glade Park, Upper Grand Valley, South Side, and Mt. Sopris Soil Conservation Districts.

#### WATERSHED VIII - YAMPA, WHITE AND NORTH PLATTE RIVERS WATERSHED

Describes water supply conditions in Yampa, Moffat, West Routt, East Routt, North Park, White River, and Douglas Creek Soil Conservation Districts.

#### WATERSHED IX -LOWER SOUTH PLATTE RIVER WATERSHED

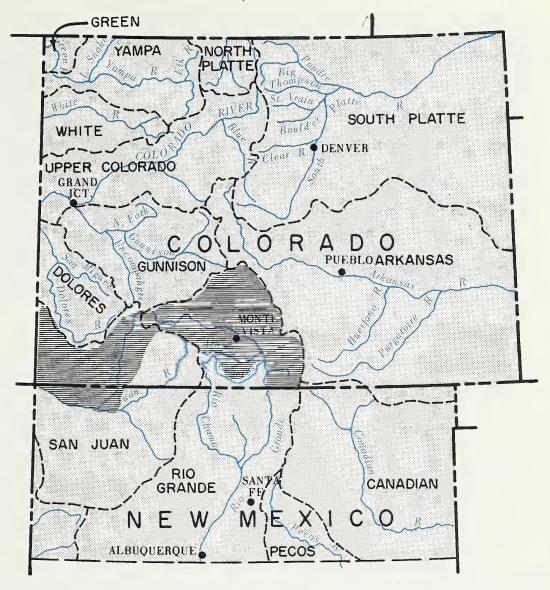
Describes water supply conditions in Sedgwick, South Platte, Haxton, Peetz, Padroni, Morgan, Rock Creek, and Yuma Soil Conservation Districts.

#### APPENDIX I - SNOW SURVEY MEASUREMENTS

#### APPENDIX II -SOIL MOISTURE MEASUREMENTS

#### WATER SUPPLY OUTLOOK

**as of** MARCH 1, 1974





GENERALLY ADEQUATE 100% OR MORE



LIMITED SHORTAGE 75% - 100%



SEVERE SHORTAGE 75% OR LESS



The map on this page indicates the most probable water supply as of the date of this report. Estimates assume average conditions of snow fall, precipitation and other factors from this date to the end of the forecast period. As the season progresses accuracy of estimates improve. In addition to expected streamflow, reservoir storage, soil moisture in irrigated areas, and other factors are considered in estimating water supply. Estimates apply to irrigated areas along the main streams and may not indicate conditions on small tributaries.

#### WATER SUPPLY CONDITIONS

as of

MARCH 1, 1974

SNOWFALL DURING FEBRUARY WAS BELOW NORMAL OVER BOTH STATES. MOST AREAS

STILL HAVE ABOVE NORMAL SNOWPACKS. THE SOUTH PLATTE AND RIO GRANDE

DRAINAGES IN COLORADO ARE THE MOST DEFICIENT. NONE OF THE AREAS ARE

CRITICALLY LOW. RESERVOIR STORAGE IN BOTH STATES IS GOOD AND WILL PROVIDE

EXCELLENT SUPPLEMENTAL SUPPLIES. SOILS IN THE IRRIGATED AREAS OF COLORADO

ARE GOOD. POOR CONDITIONS EXIST IN SOUTHERN NEW MEXICO.

COLORADO

THE NORTHERN PORTION OF THE STATE STILL HAS AN EXCELLENT SNOWPACK DESPITE THE DEFICIENT SNOWFALL DURING FEBRUARY. THE REST OF THE STATE HAS SLIGHTLY BELOW TO JUST ABOVE NORMAL SNOW AS OF MARCH 1st. NO AREA IS CRITICALLY SHORT. SEVERAL MONTHS OF SNOWFALL IN THE MOUNTAINS STILL REMAIN. THE BIG THOMPSON HAS EXCELLENT STORAGE AS DOES THE DENVER WATER SYSTEM. MOST OF THE REST OF THE STATE HAS AT LEAST NORMAL STORAGE. SOIL MOISTURE CONDITIONS IN THE IRRIGATED AREAS ARE REPORTED AS GOOD IN THE CENTRAL AND NORTHERN PORTIONS AND FAIR IN THE SOUTHERN PORTION OF THE STATE.

NEW MEXICO

THE SNOWPACK AT MOST OF THE HIGH ELEVATIONS IN NEW MEXICO IS STILL GOOD. THE OVERALL PACK IS 119% OF NORMAL ON THE RIO GRANDE, 132% ON THE CHAMA, AND 145% ON THE PECOS. IF THE REMAINING MONTHS PRODUCE AT LEAST NORMAL SNOW, WATER SUPPLIES SHOULD BE AT LEAST ADEQUATE THIS SUMMER. ELEPHANT BUTTE CONTAINS 879,000 ACRE FEET WHICH IS NEARLY TWICE NORMAL. ALL OTHER RESERVOIRS HAVE GOOD CARRY-OVER. SOIL MOISTURE CONDITIONS ARE POOR.

# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE SOUTH PLATTE RIVER WATERSHED IN COLORADO

as of

MARCH 1, 1974

U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE

CSU EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



ALTHOUGH THE SNOWPACK FELL OFF SLIGHTLY DURING FEBRUARY, FORECASTS ARE STILL ABOVE NORMAL. MOST TRIBUTARY STREAMS OF THE SOUTH PLATTE SHOULD FLOW ABOUT 105% OF THE NEW 1958-72 AVERAGE. RESERVOIR STORAGE IS UP AND SHOULD PROVIDE AN EXCELLENT SUPPLEMENTAL SUPPLY. SOIL MOISTURE IS GOOD.

STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	FORE-	% of	+		Flow P	eriod
FORECAST POINT	CAST	Average	Average	STREAM or AREA	Spring Season	Late Season
					_	
Big Thompson at Drake	115	107	107	Bear Creek	Exc.	Avg.
(1)				Coal Creek	Exc.	Avg.
Boulder at Orodell	52	106	49	North Fork of South	Exc.	Avg.
Cache La Poudre at	260	105	247	Platte		J
Canyon Mouth (2)				North Fork of Cache	Exc.	Avg.
Clear Cr. at Golden (3)	135	107	127	La Poudre		Ü
Saint Vrain at Lyons(4)	78	104	75	Ralston Creek	Exc.	Avg.
,				Rock Creek	Exc.	Avg.

(1) Observed flow plus by-pass to power plants. (2) Observed flow minus trans-basin diversions plus municipal and irrigation diversions. (3) Observed flow minus diversion through August P. Gumlick Tunnel. (4) Observed flow plus change in storage in Price Reservoir.

#### SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average +
Big Thompson	5	120	107
Boulder	3	132	109
Cache La Poudre	8	119	117
Clear Creek	6	133	102
Saint Vrain	3	114	95
South Platte	yeard As	91	82

#### SOIL MOISTURE

RIVER BASIN	Number of		'S MOISTURE CENT OF:
	Stations	Last Year	Average +
Big Thompson	3	82	74
Boulder	1	100	82
Cache La Poudre	2	110	100
Clear Creek	2	96	98
Saint Vrain	2	95	70
South Platte	1.2.	_ 100	<sup>1</sup> 117 <sup>1</sup>

RESERVOIR STORAGE (Thousand Ac Et ) END OF MONTH

MESERADIK SIONAGE C	iliousanu	MU. 11.,	END OF	MONTH	WESTKAOIK SIGKWOT (1	iiousaiiu i	nu.   L.)	ENDOFF	10N TH
RESERVOIR	Usable	L	sable Stora	ige	RESERVOIR	Usable	Usable Storage		
RESERVOIR	Capacity	This Year	Last Year	Average	RESERVOIR	Capacity	This Year	Last Year	Average †
Antero Barr Lake Black Hollow Boyd Lake Cache La Poudre Carter Lake Chambers Lake Cheesman Cobb Lake Eleven Mile Fossil Creek	33.0 32.2 8.0 44.0 9.5 108.9 8.8 79.0 34.0 97.8 11.6	15.9 26.6 4.6 44.0 7.5 91.3 3.7 50.4 19.3 97.8 7.4	15.9 26.5 4.4 37.5 7.8 95.1 4.4 41.4 21.0 90.9 8.8	13.9 22.6 3.8 36.5 7.8 87.1 3.3 56.7 15.1 87.0 7.3	Halligan Horsetooth Lake Loveland Lone Tree Mariano Marshall Marston Milton Standley Terry Lake Union	6.4 143.5 14.3 9.2 5.4 10.3 18.0 24.4 42.0 8.2 12.7	6.4	5.1 95.2 8.7 8.5 5.1 3.5 14.5 13.3 20.5 5.8	4.4 96.6 9.1 6.5 4.9 4.2 14.6 13.3 17.3 5.0
Gross	43.1	29.3	24.0	28.6	Windsor	18.6	10.8	12.7	10.2

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT P.O. BOX 17107 DENVER, COLORADO 80217

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR - 101

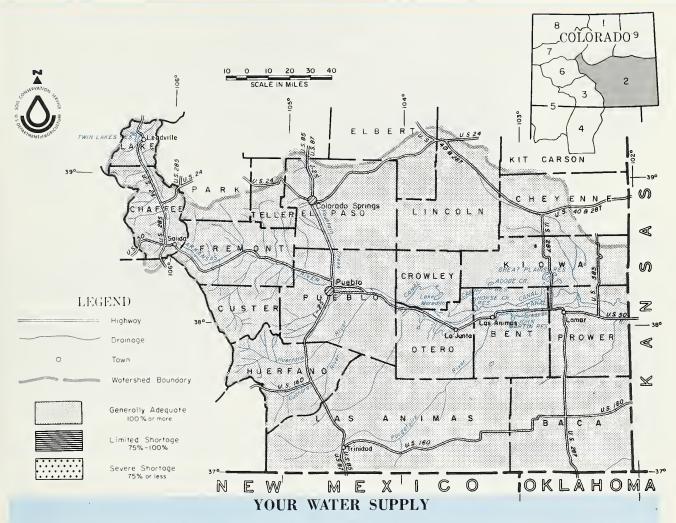


## FIRST CLASS

#### WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE ARKANSAS RIVER WATERSHED IN COLORADO

as of MARCH 1, 1974

## U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE CSU EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



FEBRUARY SNOWFALL WAS SLIGHTLY BELOW NORMAL, HOWEVER, THE SNOWPACK IS STILL ABOVE NORMAL. SUMMER FLOWS SHOULD BE NEAR NORMAL IF THE NEXT FEW MONTHS PROVIDE AT LEAST AVERAGE SNOWFALL. SMALL STREAMS SHOULD FLOW GOOD DURING THE EARLY SEASON IF SPRING TEMPERATURES ARE AT LEAST NORMAL. CARRY-OVER STORAGE IS SIMILAR TO LAST YEAR AND NEAR NORMAL. SOIL MOISTURE CONDITIONS ARE REPORTED AS GOOD.

This report prepared by

JACK N. WASHICHEK and RONALD E. MORELAND SNDW SURVEY UNIT, SOIL CONSERVATION SERVICE DENVER, COLDRADD M. D. BURDICK STATE CONSERVATIONIST R.L. PORTER ...AREA CONSERVATIONIST DONALD A. MOSS -- AREA CONSERVATIONIST

U. S. DEPARTMENT OF A GRICULTURE - SOIL CONSERVATION SERVICE

DENVER COLDRADO LA JUNTA, COLDRADO LA JUNTA, COLDRADO

STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

FORE-	% of	+		Flow P	eriod
CAST	Average	Average	STREAM or AREA	Spring Season	Late Season
320 325 11 38	110 105 110 100	290 313 10 38	Apishapa Fountain Creek Grape Hardscrable Creek Huerfano Monument Creek	Exc. Exc. Exc. Exc. Exc. Exc.	Avg. Avg. Avg. Avg. Avg.
	320 325 11	320 110 325 105 11 110	320 110 290 325 105 313 11 110 10	320	320

SUMMARY of SNOW MEASUREMENTS

SOIL MOISTURE

(COMPARISON WITH PREVIOUS YE	ARS)						
RIVER BASIN and/or	Number of Courses	urses WATER AS PERCENT OF		RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
SUB-WATERSHED	Averaged	Last Year	Average +		Stations	Last Year	Average +
Arkansas Cucharas and Purgatoire	10 2	125 135	112 146	Arkansas Cucharas and Purgatoire	3 2	101 79	113 75

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

DESERVOIR	Usable	Usable Storage			RESERVOIR	Usable	Usable Storage		
RESERVOIR	Capacity	This Year	Last Year	Average †	rage	Capacity	This Year	Last Year	Average
Adobe Clear Creek Cucharas Great Plains Horse Creek	61.6 11.4 40.0 150.0 26.9	3.8 6.1 43.5	0.0 5.7 0.0 25.2 0.0	8.2	John Martin Meredith Model Turquoise Twin Lakes	353.9 41.9 15.0 120.5 57.9	27.2 1.3 48.1	17.1 22.5  40.0 25.5	90.1 13.1 3.5  25.9

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR-101

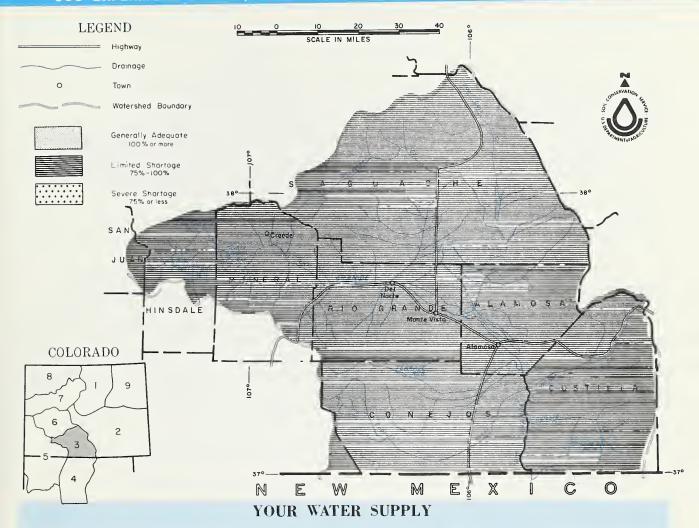


FIRST CLASS

# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE UPPER RIO GRANDE WATERSHED IN COLORADO

**as of** MARCH 1, 1974

# U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE CSU EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



STREAMFLOW FORECASTS ARE BELOW THE 1958-72 AVERAGE ON THE RIO GRANDE AND ITS TRIBUTARIES IN COLORADO. ABOVE AVERAGE SNOWFALL IS NEEDED TO ASSURE AVERAGE STREAMFLOWS FOR THIS SEASON. HOWEVER, RESERVOIR STORAGE IS EXCELLENT, BEING 180% OF AVERAGE AND 236% OF LAST YEAR. SOIL MOISTURE CONDITIONS IN THE MOUNTAINS ARE SLIGHTLY BELOW AVERAGE.

This report prepared by

JACK N. WASHICHEK and RONALO E. MORELANO
SNOW SURVEY UNIT, SOIL CONSERVATION SERVICE

OENVER, COLORAGO

M. G. BURDICK ... STATE CONSERVATIONIST

U. S. DEPARTMENT OF A GRICULTURE - SOIL CONSERVATION SERVICE

OGNVER. COLORADO

ALAMOSA, COLORADO

ALAMOSA, COLORADO

#### STREAMFLOW FORECASTS (1000 Ac Ft.) Apr-Sept

WATER SUPPLY OUTLANK Expressed as "Poor, Fair, Average, Ex-

10	FORE-	FORE- % of			Flow F	eriod
FORECAST POINT	CAST	Average	Average	STREAM or AREA	Spring Season	Late Season
Alamosa abv Terrace	55	89	62	Saguache Creek	Exc.	Avg
Conejos nr Mogote (1)	190	103	184	Sangre de Cristo Cr.	Exc.	Avg
Culebra at San Luis (2) Rio Grande at 30 Mile Bridge (3)	15	88 83	17	Trinchera Creek	Exc.	Avg
Rio Gr. nr Del Norte(3)	400	85	468			
So. Fork at So. Fork	100	87	115			

(1) Observed flow plus change in storage in Platoro Reservoir. (2) Observed flow plus change in storage in Sanchez Reservoir. (3) Observed flow plus change in storage in Sanchez Reservoir. (3) Observed flow plus change in storage in Sanchez Reservoir. (3) Observed flow plus change in storage in Sanchez Reservoir.

#### SUMMARY of SNOW MEASUREMENTS

SOIL MOISTU	IKE
-------------	-----

Courses	I WATER AS I	PERCENT OF	RIVER BASIN	Number of	THIS YEAR'S MOISTURE as PERCENT OF:	
Averaged			Stations	Last Year	Average -	
2	66	104	Alamora	1	102	89
3		104		1	102	89
2	115	131	Culebra	1	93	84
10	67	87	Rio Grande	3	86	79
		2 66 3 82 2 115	2 66 104 3 82 103 2 115 131	2 66 104 Alamosa 3 82 103 Conejos 2 115 131 Culebra	2 66 104 Alamosa 1 3 82 103 Conejos 1 2 115 131 Culebra 1	2 66 104 Alamosa 1 102 3 82 103 Conejos 1 102 2 115 131 Culebra 1 93

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

	Usable	able Usable Storage			RESERVOIR	Usable	Usable Storage		
RESERVOIR	Capacity   T	This Year	Last Year	Average †	RESERVOIR	Capacity	This Year	Last Year	Average
Continental Platoro Rio Grande	26.7 60.0 45.8	37.5	4.8 2.9 18.4	5.2 8.6 16.9	Sanchez Santa Maria Terrace	103.2 45.0 17.7	17.5 7.2 9.3	5.9 4.8 5.7	13.2 6.0 5.5

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID U. S. DEPARTMENT OF AGRICULTURE AGR - 101

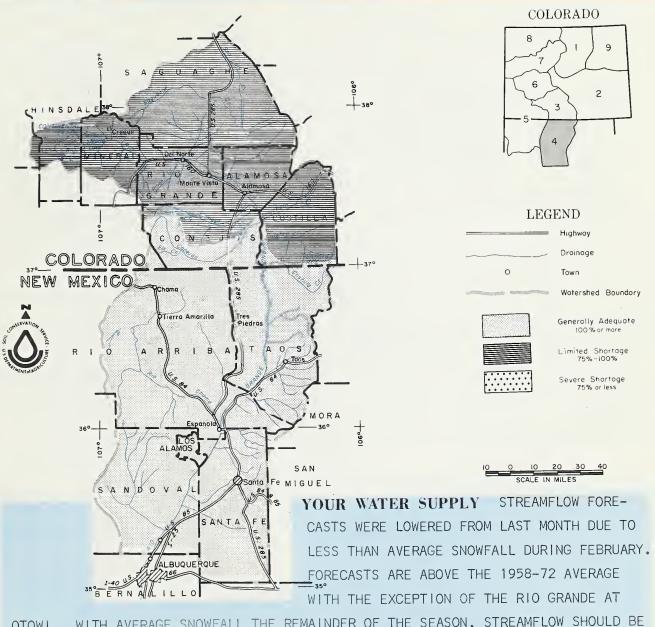


FIRST CLASS

# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE RIO GRANDE WATERSHED IN NEW MEXICO

**as of** MARCH 1, 1974

# U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE CSU EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



OTOWI. WITH AVERAGE SNOWFALL THE REMAINDER OF THE SEASON, STREAMFLOW SHOULD BE AVERAGE TO SLIGHTLY ABOVE. RESERVOIR STORAGE IS MUCH ABOVE AVERAGE. ELEPHANT BUTTE HAS 879,000 ACRE FEET COMPARED TO 382,000 LAST YEAR AND 439,000 AVERAGE. CABALLO AND McMILLEN AVALON ARE SLIGHTLY BELOW LAST YEAR AND THE AVERAGE.

ACK N. WASHICER and RONALD E. MORELAND
SNOW SURVEY UNIT, SOIL CONSERVATION SERVICE
OENVER, COLORAGO

MARION E. STRONG...-STATE CONSERVATIONIST

J. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

ALBUQUEROUE, NEW MEXICO

SANTA FE, NEW MEXICO

#### STREAMFLOW FORECASTS (1000 Ac. Ft.) Mar-Jul

WATER SUPPLY OUTLOOK Expressed as "Paar, Fair, Average, Excellent" With Respect to Usual Supply.

			THE COLLEGE COLL	are with Kespect	ta Osuai Supply.	
FORFCAST BOINT	FORE-	% of	+		Flow P	'eriad
FORECAST POINT	CAST	Average	Average	STREAM ar AREA	Spring Seas <i>a</i> n	Late Seasan
Costilla at Cost. (1) Pecos at Pecos Rio Chama at El Vado Rio Grande at Otowi(2) Rio Gr. at San Mar (2) Rio Hondo nr Valdez Red R. at mouth nr Questa Jemez R. nr Jemez Santa Cruz at Cundiyo	18 55 200 525 375 16 30	95 134 109 100 106 114 103	19 41 184 526 355 14 29 29	Embudo Creek Mora River Nambe Creek Rio Ojo Caliante Rio Pueblo de Taos Santa Fe Creek	Exc. Exc. Exc. Exc. Exc. Exc.	Avg. Avg. Avg. Avg. Avg.
The farecast of the Rio Crando at San Marrial is	% at	the Asses	an wood by	the Flenhant Butte Injection District (1) Ob-	- 10. 1	,

The farecast of the Rio Grande at San Marcial is \_ % of the Average used by the Elephant Butte Irrigatian District. (1) Observed flow plus change in Costilla Reservair. (2) Observed flaw plus change in storage in El Vado and Abiquiu Reservair.

#### SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS TEARS)								
RIVER BASIN	Number af	THIS YEAR'S SNOW						
and/ar	Caurses	WATER AS PERCENT OF						
SUB-WATERSHED	Averaged	Last Year	Average +					
Pecos	1	83	145					
Rio Chama	4	104	132					
Rio Grande, NM	10	85	119					
Red River	2	83	120					

#### SOIL MOISTURE

OOIE MOIOTORE				
RIVER BASIN	Number of	THIS YEAR'S MOISTURE as PERCENT OF:		
	Statians	Last Year	Average †	
Pecos	2	100	86	
Rio Chama	2	173	139	
Rio Grande	4	80	106	
Red River	1	94	71	

#### RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

25-5-14012	Usable	Us	able Stara	ige	Usable		Us	Usable Starage	
RESERVOIR	Capacity	This Year	Last Year	Average	RESERVOIR	Capacity	This Year	Last Year	Average
Alamorgordo	111	100	87	79	El Vado	195	127	23	3
Caballo	344	60	73	87	McMillen-Avalo	n 32	14	33	20
Conchas	273	175	143	186					
Elephant Butte	219 <b>5</b>	879	382	439					
		•			'		•	+ 1958	-1972 period

Return if nat delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR - 101

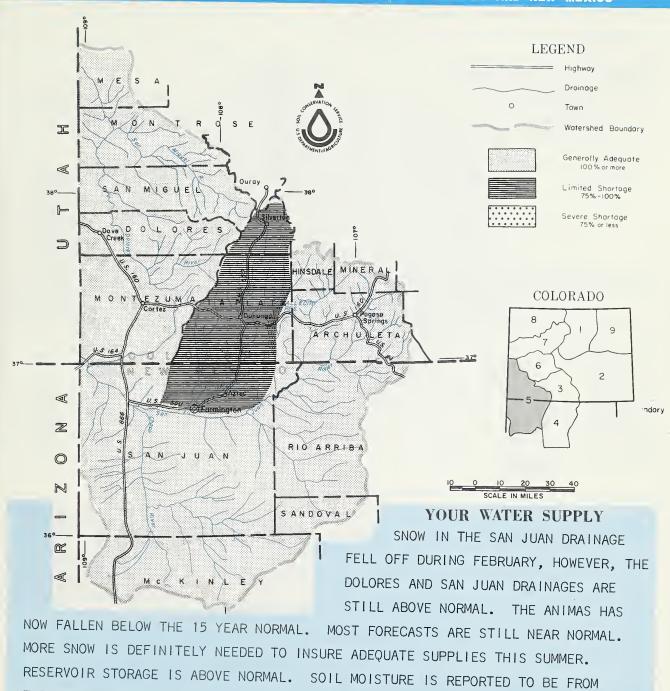


FIRST CLASS MAIL

# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN WATERSHEDS IN COLORADO AND NEW MEXICO

as of MARCH 1, 1974

U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



This report prepared by

JACK N WASHICHEK and RONALD E. MORELAND
SNOW SURVEY UNIT, SOIL CONSERVATION SERVICE
DENVER, COLDRADO.

FAIR TO GOOD.

M. D. BURDICK —STATE CONSERVATIONIST

OENVER: COLDRADO

U. S. DEPARTMENT OF A GRICULTURE - SOIL CONSERVATIONIST

R.L. PORTER — AREA CONSERVATIONIST

ALAMOSA, COLDRADO

ALAMOSA, COLDRADO

AND STRONG — NEW MEXICO

ALAMOSA, COLDRADO

AND BURDICK — STRONG — STRONG — STRONG — STRONG — STRONG — STRONG — NEW MEXICO

ALAMOSA, COLDRADO

AND BURDICK — STRONG — STRONG — STRONG — STRONG — STRONG — STRONG — NEW MEXICO

ALAMOSA, COLDRADO

SANTA FE, NEW MEXICO

		7,191	<u> </u>
FORECAST POINT	FORE-	% of	†
	CAST	Average	Average
Animas at Durango Dolores at Dolores La Plata at Hesperus Los Pinos at Bayfield (1)	385	91	423
	230	100	232
	21	88	24
	175	88	198
Piedra Cr. at Arboles San Juan at Carracas Inflow to Navajo Rs. (1) (Apr-Jul)	180	97	185
	345	97	354
	600	100	597

## STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

WHILK SOUTE OUTLOOK	cellent with Respec	t to Usual Supply.
	Flow	Period
STREAM or AREA	Spring Season	Late Season
Florida Mancos San Miguel	Avg. Avg. Fair	Avg. Avg. Avg.

#### (1) Observed flow plus change in storage in Vallicito Reservoir. SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)								
RIVER BASIN	Number of	THIS YEAR'S SNOW						
and/or	Courses	WATER AS PERCENT OF						
SUB-WATERSHED	Averaged	Last Year	Average +					
Animas	6	72	91					
Dolores	4	90	115					
San Juan	5	76	101					

#### SOIL MOISTURE

SUIL MUISTUKE			
RIVER BASIN	Number of		S MOISTURE CENT OF:
	Stations	Last Year	Average +
Animas Dolores San Juan	3 3 3	85 85 85	97 97 97

#### RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

TESTITOIN STONAGE (	nousuna	No. 1 (.)	END OF	PIONIA
RESERVOIR	Usable	sable Stora	ge	
KESEKVOIK	Capacity	This Year	Last Year	Average †
Groundhog Lemon lavajo fallecito Narraguinnep Jackson Gulch	22 40 1696 126	15 19 985 70 5 6	7 21 883 74 16 5	9 19 543 54 

#### DECEDVOID CTODACE (Thousand Ac Et )

<u> </u>	KESEKANIK ZINKARE (I	nousanu	AU. PL.	END OF I	HTMON
	RESERVOIR	Usable	U	sable Store	age
ge †	RESERVOIR	Capacity	This Year	Last Year	Average +
9					
9					
3					
4					
-		1			
4					
- 1	1	l		. 1050	1070

+ 1958-1972 period.

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT P.O. BOX 17107 DENVER, COLORADO 80217

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U. S DEPARTMENT OF
AGRICULTURE
AGR-101

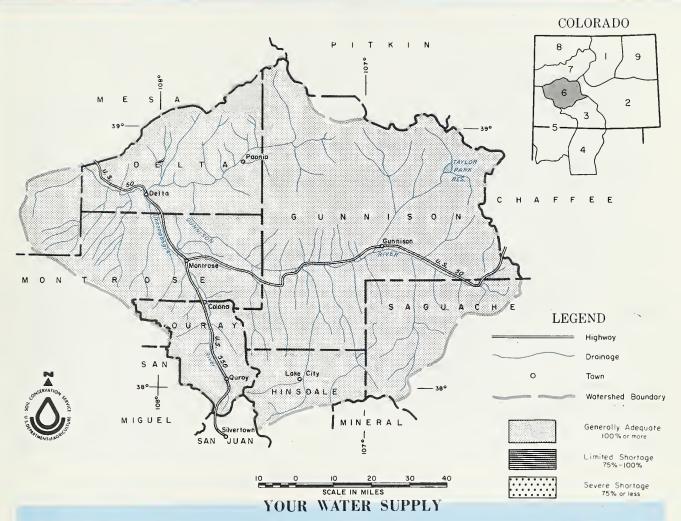


FIRST CLASS

# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE GUNNISON RIVER WATERSHED IN COLORADO

**as of** MARCH 1, 1974

## U.S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



THERE WAS SLIGHTLY LESS SNOWFALL ON THE GUNNISON DRAINAGE THAN NORMAL DURING FEBRUARY, HOWEVER THE SNOWPACK IS STILL ABOVE NORMAL. FORECASTS RANGE FROM 102% ON THE UPPER GUNNISON TO 114% ON THE LOWER GUNNISON. LOW ELEVATION SNOW IS GOOD. CARRY-OVER STORAGE IS SLIGHTLY ABOVE NORMAL AND SOIL MOISTURE CONDITIONS ARE GOOD.

This report prepared by

JACK N. WASHICHEK and RONALO E. MORELANO
SNOW SURVEY UNIT, SOIL CONSERVATION SERVICE
OENVER, COLORACO

M. O. BURDICK---STATE CONSERVATIONIST

J. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

DENVER, COLORADO

GLENWOOD SPRINGS, COLORADO

STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept WATER SUPPLY OUTLANK Expressed as "Poor, Fair, Average, Ex-

	FORE-	% of	+		Flow P	eriod
FORECAST POINT	CAST	Average	Average	STREAM or AREA	Spring Season	Late Season
Gunnison R. inflow to						
Blue Mesa Res. (1)	800	102	793	Taylor	Exc.	Avg.
Gunnison nr Grand						
Junction (2)	1350	114	1184			
N. Fork of Gunnison (3)	300	114	263			
Surface Creek nr						
Cedaredge	16	100	16			
Uncompangre at Colona	145	108	134			

(1) Observed flow plus change in storage in Taylor Reservoir. (2) Observed flow plus change in storage in Blue Mesa, Morrow Point and Taylor Reservoirs. (3) Observed flow plus change in storage in Paonia Reservoir.

#### SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

Gu Su Un

RIVER BASIN	Number of Courses		AR'S SNOW PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average +
unnison urface Creek ucompahgre	12 3 3	101 86 90	111 99 107

#### SOIL MOISTURE

SOIL MOISTORE				
RIVER BASIN	Number	THIS YEAR'S MOISTURE as PERCENT OF:		
	Stations	Stations Last Year		
Gunnison	1	118	130	
Surface Creek	1	92	110	
Uncompahgre	2	92	104	
, ,				

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR STORAGE (Thousand Ac Et ) END OF MONTH

, person volu	Usable	Us	Usable Storage		DESERVOIR	Usable	U	sable Stor	age
RESERVOIR	Capacity	This Year	Last Year	Average †	RESERVOIR	Capacity	This Year	Last Year	Average
Blue Mesa Morrow Point Taylor	830 121 106	360 115 63	315 115 40	354 109 65					

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$ 300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR-101

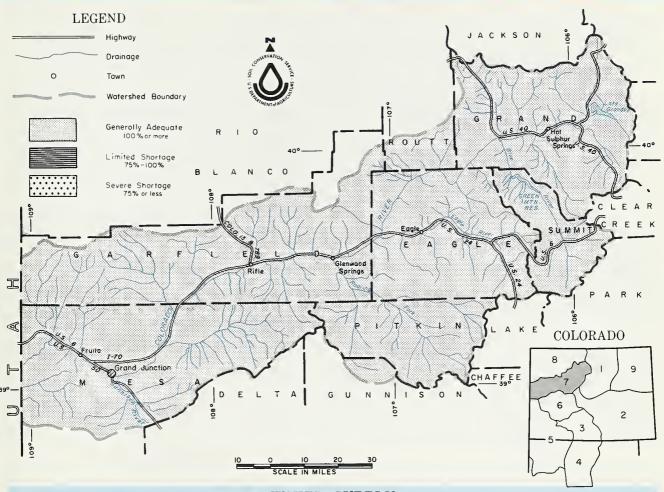


FIRST CLASS

# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE COLORADO RIVER WATERSHED IN COLORADO

**as of** MARCH 1, 1974

## U.S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



YOUR WATER SUPPLY

SNOWPACK CONDITIONS IN THE COLORADO BASIN ARE NEAR NORMAL TO SLIGHTLY ABOVE ON ALL TRIBUTARIES. THEREFORE, STREAMFLOW FORECASTS RANGE FROM NEAR THE 1958-72 AVERAGE ON THE BLUE RIVER AND COLORADO MAINSTEM TO 126% ON THE WILLIAMS FORK. SNOWFALL DURING THE MONTH WAS SLIGHTLY LESS THAN NORMAL BUT THE LOW ELEVATION SNOW COURSES ARE CONSIDERABLY ABOVE AVERAGE. RESERVOIR STORAGE IS ABOVE LAST YEAR'S IN DILLON RESERVOIR AND SLIGHTLY LOWER IN GRANBY, GREEN MOUNTAIN AND WILLIAMS FORK RESERVOIR. SOIL MOISTURE CONDITIONS ARE REPORTED AS GOOD.

JACK N. WASHICHEK and RONALO E. MORELANO SNOW SURVEY UNIT. SOIL CONSERVATION SERVICE OENVER, COLORADO M. O. BURDICK
STATE CONSERVATIONIST

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
OENVER. COLORADO

GLENWOOD SPRINGS, COLORADO

#### STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sep+ WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	FORE-	% of	+		Flow	Period
FORECAST POINT	CAST	Average	Average	STREAM or AREA	Spring Season	Late Season
Blue R. inflow to	170	100	169	Brush	Exc.	Avg.
Blue Abv Green Mt. (1) Colo. R. inflow to	300	101	297	Eagle River Gypsum Creek	Exc. Exc.	Avg.
Granby Res. (2)	240	105	228			
Colo. R. nr Dotsero(3)	1475	103	1434			
Roaring Fk. at Glenwood (4)	750	105	713			
Wm Fk. nr Parshall (5)	80	126	63			
Willow Cr. inflow to Willow Cr. Res.	55	117	47			
Colorado nr Cameo (6)	2500	105	2370			

(1) Observed flow plus diversions through Roberts Tunnel and change in storage in Dillon Reservoir. (2) Observed flow corrected for change in storage in Lake Granby as furnished by U.S.B.R. and diversions by Adams Tunnel and Grand River Ditch. (3) Observed flow plus the changes as indicated in (1), (2) and (5) plus Moffat Ditch and change in Homestake, Williams Fork, Green Mt. and Willow Creek Reservoirs. (4) Observed flow plus diversions through Divide and Twin Lakes Tunnels plu change in storage in Ruedi Reservoir. (5) Observed flow plus diversions through August P. Gumlick Tunnel. (6) Observed flow plus the changes as indicated in (3) and (2).

SUMMARY Of SNOW MEASUREMENTS

SOIL MOISTURE

SOIL	MOIS	TURE

RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF		RIVER BASIN Nur			S MOISTURE CENT OF:
SUB-WATERSHED	Averaged	Last Year	Average +		Stations	Last Year	Average
Blue River Colorado Pla†eau Roaring Fork Williams Fork Willow	8 20 3 7 3 2	131 128 87 115 131 147	102 114 98 111 133 115	Blue River Colorado Roaring Fork Willow	1 5 1 2	103 94 56 96	118 100 80 108

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

255524012	Usable	Usable Storage		ge	855504040	Usable	Usable Storage		
RESERVOIR	Capacity	This Year	Last Year	Average †	RESERVOIR	Capacity	This Year	Last Year	Average †
Dillon Granby Green Mountain Homestake	254 466 147 43	239 388 73 27	219 333 77 18	233 235 67 17	Ruedi Vega Williams Fork Willow Creek	101 32 97 9	62 14 46 7	62 14 57	65 11 29 7

+ 1958-1972 period.

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300

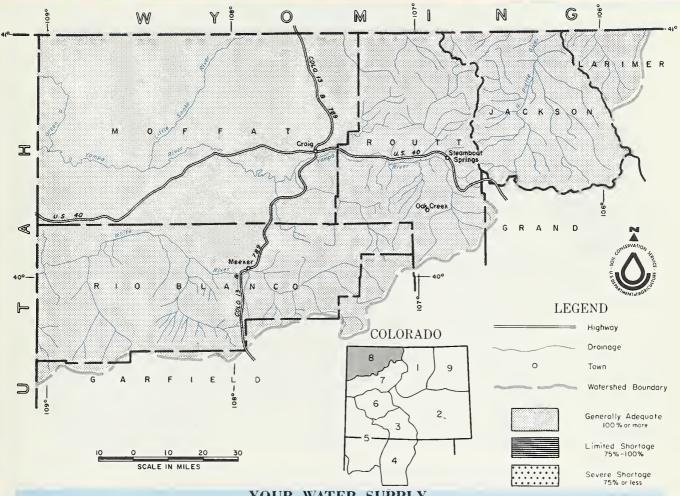


FIRST CLASS MA

#### WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE YAMPA, WHITE, AND NORTH PLATTE RIVER WATERSHEDS IN COLORADO

MARCH 1, 1974

#### U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



#### YOUR WATER SUPPLY

SNOWFALL IN THE NORTHERN PORTION OF THE STATE STILL REMAINS HIGH. LOW ELEVATION SNOW IS MUCH ABOVE NORMAL. IF THE SNOWPACK CONTINUES TO FALL AT EVEN A NORMAL RATE, SUMMER FLOWS SHOULD BE EXCELLENT. SMALL STREAMS SHOULD ALSO HAVE EXCELLENT FLOWS THIS SUMMER. SOIL MOISTURE IN THE IRRIGATED AREAS IS REPORTED TO BE EXCELLENT.

JACK N. WASHICHEK and RDNALO E. MDRELAND SNOW SURVEY UNIT, SOIL CONSERVATION SERVICE DENVER, CDLORADD

M. D. BURDICK --- STATE CONSERVATIONIST DUANE L. JOHNSON -- AREA CONSERVATIONIST S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE DENVER. COLORADO GLENWOOD SPRINGS, COLORADO

#### STREAMFLOW FORECASTS (1000 Ac Ft ) Apr-Sept

SIKEAMPLUW FUKEGASIS (1000 F	IC. Ft.)	yh! -2	epi
FORECAST POINT	FORE - CAST	% of Average	Average
Elk at Clark Laramie nr Woods Little Snake at Lily N. Platte at Northgate White nr Meeker Yampa nr Maybell Yampa at Steamboat Springs	225 197 450 400 300 1100 325	114 155 139 167 102 118 119	198 127 324 240 295 905 274

WATER SUPPLY OUTLOOK Exp	lent" With Respect	air, Average, Ex- to Usual Supply.
	Flow	Period
STREAM or AREA	Spring Season	Late Season
Canadian River Hunt Creek Illinois River Michigan River Oak Creek Trout Creek	Exc. Exc. Exc. Exc. Exc.	Exc. Exc. Exc. Exc. Exc.

#### SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF			
SUB-WATERSHED	Averaged	Last Year	Average +		
Elk Laramie North Platte White Yampa	1 2 5 2 5	137 142 126 108 132	110 123 117 102 117		

#### SOIL MOISTURF

SOIL MOISTONE				
RIVER BASIN	Number of	THIS YEAR'S	MOISTURE ENT OF:	
	Stations	Last Year	Average 1	
Laramie North Platte Yampa	2 2 1	110 96 71	100 108 102	

+ 1958-1972 period.

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID U. S. DEPARTMENT OF AGRICULTURE AGR-101

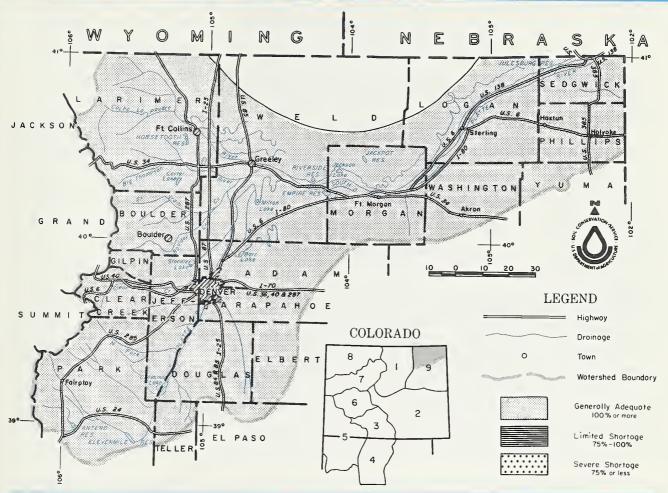


FIRST CLASS

# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE LOWER SOUTH PLATTE RIVER WATERSHED IN COLORADO

**as of** MARCH 1, 1974

#### U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE CSU EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



#### YOUR WATER SUPPLY

FEBRUARY SNOW WAS SLIGHTLY LESS THAN NORMAL BUT THE SNOWPACK IS STILL GENERALLY ABOVE NORMAL. THE UPPER SOUTH PLATTE AND THE ST. VRAIN ARE THE ONLY TWO DRAINAGES THAT HAVE LESS THAN NORMAL SNOW. ALL STREAMS IN THE BASIN SHOULD FLOW NEAR THE NEW 15 YEAR AVERAGE. CARRY-OVER STORAGE IS 104% OF NORMAL AND WILL PROVIDE SOME SUPPLEMENTAL WATER. SMALL STREAMS SHOULD FLOW ABOUT NORMAL. SOIL MOISTURE IS GOOD.

This report prepared by

JACK N. WASHICHEK and RONALO E. MORELANO
SNOW SURVEY UNIT. SOIL CONSERVATION SERVICE
OENVER. COLORAGO

M. O. BUROICK -- STATE CONSERVATIONIST

J. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
OENVER, COLORADO
STERLING, COLORADO

#### STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

### WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

_	FORE-	% of	+		Flow	Period
FORECAST POINT	CAST	Average	Average	STREAM or AREA	Spring Season	Late Season
Big Thompson at Drake	115	107	107	South Platte from Greeley to Ft.	Avg.	Avg.
Boulder at Orodell Cache La Poudre at Canyon Mouth (2)	55 260		49 247	Morgan South Platte from Ft. Morgan to	Avg.	Avg.
Clear Cr. at Golden(3) Saint Vrain at Lyons (4)	135 78	107 104	127 75	Sterling South Platte below Sterling	Avg.	Avg.
	(0) (1)					

(1) Observed flow plus by—pass to power plants. (2) Observed flow minus trans—basin diversions plus municipal and irrigation diversions. (3) Observed flow minus diversion through August P. Gumlick Tunnel. (4) Observed flow plus change in storage in Price Reservoir.

#### SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF			
SUB-WATERSHED	Averaged	Last Year	Average +		
Big Thompson Boulder	5	120 132	107 109		
Cache La Poudre	8	119	117		
Clear Creek	6	133	102		
Saint Vrain	3	114	95		
South Platte	3	91	82		

#### SOIL MOISTURE

RIVER BASIN	Number of		S MOISTURE CENT OF:
	Stations	Last Year	Average 1
Big Thompson	3	82	74
Boulder	1	100	82
Cache La Poudre	2	110	100
Clear Creek	2	96	98
Saint Vrain	2	95	70
South Platte	2	100	117

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable	Usable Storage					
RESERVOIR	Capacity	This Year	Last Year	Average †			
Carter Cheesman Eleven Mile Empire Horsetooth	108.9 79.0 97.8 37.7 143.5	50.4 97.8 8.5	95.1 41.4 90.9 26.5 95.2	87.1 56.7 87.0 29.6 96.6			

RESERVOIR	STORAGE	(Thousand	Ac. Ft.)	END OF MONTH
-----------	---------	-----------	----------	--------------

RESERVUIR STURAGE (	iivusaiiu <i>i</i>	AU. PL.	END OF M	IONTH
RESERVOIR	Usable	U	sable Stora	ge
RESERVOIR	Capacity	This Year	Last Year	Average †
Jackson Julesburg Prewitt Point of Rocks Riverside	35.4 28.2 32.8 70.0 57.5	28.8 19.8 20.6 69.8 57.5	29.7 19.8 18.1 70.3 53.2	31.7 20.4 18.1 59.2 53.0

+ 1958-1972 period.

Return if not delivered
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
P.O. BOX 17107
DENVER, COLORADO 80217

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID U. S. DEPARTMENT OF AGRICULTURE AGR - 101



FIRST CLASS MAIL

#### APPENDIX I

#### SNOW COURSE MEASUREMENTS as of March 1, 1974

North Platte River   Cameron Pass   2/27   68   26.5   22.5   22.5   22.5   22.5   20.5   2		ECORO			
CHOIL COURTS	OATE	SNOW	WATER	WATER (	ONTENT HES)
SNOW COURSE	SURVEY	(INCHES)	(INCHES)	LAST YEAR	AVG 53 67
NODTH DIATTE BACIN					
	2/26	19	15.8	10 0	14 1
		47	15.0		
	2/26	60	19.9	14.3	14.9
North Platte River					
	2/27	68	26.5	22.5	22.5
				1	20.4
	2/26	26	7 3	5 9	6.2
1 1			1		
		50			
Bia Thompson River					
Deer Ridge				1	
		_			
	,				11.9
	2/26	31	9.6	6.7	
				2.4	2.3
					22.5
			1		
			1	1	
			l		10.2
Pine Creek	2/26	10 25	2.6 6.8	2.9 6.2	1.6 5.4
Red Feather	2/26	23	0,0	0.2	7.4
Clear Creek Baltimore (B)	2/26	26	7.3	5.9	6.2
Berthoud Falls	2/26	46	13.5		11.6
Empire	2/26		. 7.6	4.3	6.0
Grizzly Peak (B)	2/26	52	15.3	9.5	14.6
Loveland Lift Loveland Pass	2/27	43 46	12.0 13.6	12.8	16.9 12.7
	2/2/	1,0	15.0		
Saint Vrain River Copeland Lake	2/27	15	3.8	4.1	3.8
Ward	2/28	19	4.0	4.9	4.8
Wild Basin	2/27	32	9.8	6.4	9.9
South Platte River					
Como	2/26	17	3.9	7.1	7 7
Geneva Park Horseshoe Mt.	2/27 2/25	14 29	2.8 6.9	3.9	3.3
Hoosier Pass	2/27	36	9.8	8.5	10.6
Jefferson Creek	2/26	22	5.1	7.1	7.6
Mosquito	2/25		6.0	6.7	
Trout Creek Pass	2/25	23	4.9	4.6	
ARKANSAS BASIN					
Arkansas River					
Bigelow Divide	2/22	48	10.0	4.9 7.4	5.1 9.0
Cooper Hill (B) East Fork	3/01,	37 30	10.2	5.9	8.0
Four Mile Park	2/28	22	5.1	4.3	5.1
Fremont Pass	2/22	46	13.2	10.2	12.9
Garfield	2/25	41	13.2	12.5	11.3
Hermit Lake Monarch Pass	2/26	31 51	9.8 15.6	8.6	14.0
Tennessee Pass	2/25	30	6.6	7.7	8.7
Twin Lakes Tunnel	2/26		8.5	6.0	8.9
Westcliffe	2/26	29	9.2	6.4	6.0

	CUF	RENT INFO	RMATION	PAST R	ECORO
	OATE	SNOW	WATER	WATER C	
SNOW COURSE	OF SURVEY	SNOW OEPTH (INCHES)	WATER CONTENT (INCHES)	L'AST YEAR	AVG. 53 67
Cucharas River Blue Lakes Cucharas Pass LaVeta Pass (B)	2/28 2/28 2/28	20 36 37	6.9 11.2 12.7	3.6 8.0 7.3	7.2
Purgatoire River Bourbon RIO GRANDE BASIN-COLO	2/26	24	6.4	6.8	5,9
Alamosa River Silver Lakes Summitville	2/28 2/26	23 52	5.4 15.2	9.8 21.2	5.1 14.7
Conejos River Cumbres LaManga Platoro River Springs	2/25 2/25 2/27 2/27	54 53 43 20	17.6 15.8 13.2 5.7	19.0 19.6 17.8 7.6	16.5  13.9 5.0
Culebra River Brown Cabin Cottonwood (B) Culebra LaVeta Pass (B) Trinchera (B)	2/28 2/28 2/22 2/22 2/28 2/27	25 19 25 37 28	7.3 5.5 6.4 12.7 8.4	6.9 6.0 9.3 7.3 8.6	7.4 7.2
Rio Grande Cochetopa Pass Grayback Hiway Lake Humphrey Love Lake Pass Creek Pool Table Porcupine Santa Maria Upper Rio Grande Wolf Creek Pass Wolf Creek Sum. (B)	2/26 2/26 2/27 2/25 2/27 2/27 2/25 2/28 2/27 2/27 2/27 2/27	24 42 51 21 24 34 17 24 16 21 60	5.4 12.3 18.3 3.5 5.4 10.3 2.5 6.0 3.2 5.3 21.6 20.7	5.8 17.4 26.2 7.6 11.6 16.0 5.7 8.2 5.0 10.2 27.5 31.7	4.8  19.5 6.1  9.9 6.0 9.1 4.1 7.6 22.0 22.5
RIO GRANDE BASIN-NM Pecos River Panchuela	2/27	16	4.8	5.8	3.3
Rio Chama Bateman Capulin Chama Divide Chamita Rio Grande	2/28 2/27 3/01 2/27	32 23 18 30	11.6 5.4 4.4 9.3	11.0 4.7 5.1 8.7	9.3 3.7 3.0 7.3
Big Tesuque Blue Bird Mesa Cordova Elk Cabin Hopewell La Cueva Pajarito Peak Payrole Quemazon Rio En Medio Sandoval Taos Canyon Teakettle Tres Ritos Red River	2/25 2/28 2/25 2/25 2/26 2/27 2/28 2/26 2/27 2/25 2/27 2/26 2/26 2/26	-31 16 33 20 47 23 4 27 28 40 15 19 33 20	8.6 4.3 9.6 6.2 15.7 6.2 1.4 8.1 8.1 11.7 4.4 5.6 8.3 5.2	9.6 4.1 8.3 6.4 15.0 7.3 2.3 9.5 9.7 13.2 6.4 9.3 7.7	4.9 4.0 9.6 3.1  1.2 7.8 7.8 8.0 4.5 3.8  4.6
Hematite Park (B) Red River	2/25 2/25	14 19	4.7 5.6	6.0	3.5 5.0

NOTE: NS - No Survey
(B) - On adjacent drainage

#### APPENDIX I

#### SNOW COURSE MEASUREMENTS as of March 1, 1974

	-	RRENT INFOR		WATER	CONTENT			RENT INFO		PAST R	ONTEN
SNOW COURSE	OATE OF SURVEY	SNOW OEPTH (INCHES)	WATER CONTENT (INCHES)	LAST YEAR	AVG. 53 67	SNOW COURSE	OATE OF SURVEY	SNOW OEPTH (INCHES)	WATER CONTENT (INCHES)	LAST YEAR	AVG.
SAN JUAN-DOLORES BASIN  Animas River Cascade Lemon Mineral Creek Molas Lake Purgatory Red Mt. Pass (B) Silverton Sub-Sta Spud Mountain  Dolores River Lizard Head Lone Cone Rico Telluride Trout Lake  San Juan River Chama Divide (B) Chamita (B) Upper San Juan Wolf Cr. Pass (B)	2/27 2/28 2/27 2/27 2/27 2/27 2/26 2/27 3/01 2/27 2/27 2/27 2/27 2/27	35 27 35 36 44 65 26 50 30 33 44 18 30 67 60	10.8 7.4 10.6 11.1 12.4 21.6 7.3 16.7 15.1 16.5 8.3 8.7 13.4	14.1 11.2 16.2 13.8 22.9 29.9 10.6 24.1 16.5 15.1 10.5 9.3 14.0	10.0  12.9 11.2:  19.7 13.9  7.2 6.7 11.8 3.00 7.3 24.5 22.0	Colorado River Arrow Berthoud Pass Berthoud Summit Cooper Hill Fiddler Gulch Glenmar Ranch Gore Pass Grand Lake Lake Irene Lapland Lulu Lynx Pass McKenzie Gulch Middle Fork Milner North Inlet Pando Phantom Valley Ranch Creek Tennessee Pass (B) Vail Pass	2/27 2/25 2/26 3/01 8/2/25 2/26 2/25 2/26 2/26 2/26 2/27 2/25 2/26 2/27 2/25 2/26 2/27 2/25 2/26 2/27 2/27 2/27 2/27 2/27	48 53 58 37 36 28 36 59 36 60 37 41 32 30 33 40 30 50 47	14.0 15.7 17.5 10.2 10.0 8.2 9.3 19.0 10.1 18.9 9.3 7.5 10.2 11.8 9.0 8.2 9.2 11.6 6.6 6.1 13.4	10.7 12.0 13.1 7.4 -7.2 7.8 6.0 14.9 7.4 13.8 10.1 5.5 7.8 9.5 6.4 7.1 8.0 7.9 7.7 12.0 8.5	10.5
Wolf Cr. Summit GUNNISON BASIN Gunnison River Alexander Lake Blue Mesa Butte Cochetopa Pass (B) Crested Butte Keystone Lake City Mesa Lakes (B) McClure Pass Park Cone Park Reservoir Porphyry Creek Tomichi Surface Creek	2/27 2/27 2/25 2/26 2/27 2/27 2/25 2/27 2/28 2/26 2/25 2/25	54 38 46 24 49 59 26 48 48 33 59 54	16.7 9.5 19.2 5.4 15.0 19.2 6.6 15.7 15.7 8.7 17.3 16.1	19.4 7.3 10.5 5.8 11.1 18.3 7.1 16.2 16.7 7.3 22.0 15.6	17.4 6.9  4.8 10.3 16.7 7.0 13.5 14.7 8.8 19.5 13.7	Roaring Fork River  Aspen Independence Pass Ivanhoe Kiln  Lift McClure Pass Nast North Lost Trail Williams Fork River Glenmar Ranch Jones Pass Middle Fork Willow Creek	2/25 2/26 2/26 2/26 2/25 2/27 2/26 2/27 2/25 2/25 2/25 2/25	54 41 58 46 47 48 31 47 36 52 37	15.7 10.6 18.4 13.3 13.7 15.7 8.5 15.6	11.2 14.6 9.3 10.8 16.7 6.1	14.0 13.9 13.9 13.6 14.7 5.5 13.2 7.0 11.9
Alexander Lake Mesa Lakes (B) Park Reservoir  Uncompangre River Ironton Park Red Mountain Pass Telluride (B)	2/27 2/27 2/26 2/27 2/27 2/27	54 48 59 49 65 33	16.7 15.7 17.3 16.0 21.6 8.7	16.2 22.0	17.4 13.5 19.5 11.3 25.4 6.7	Willow Creek Pass  Plateau Creek  Mesa Lakes  Park Reservoir  Trickle Divide  YAMPA BASIN	2/25 2/25 2/27 2/26 2/26	30 40 48 59 61	15.7 17.3 19.9	8.8 16.2 22.0	10.4
COLORADO BASIN  Blue River Blue River Fremont Pass Frisco Grizzly Peak Hoosier Pass (B) Shrine Pass Snake River Summit Ranch	2/26 2/22 2/26 2/26 2/27 2/26 2/26 2/26	46 24 52 36 52 31	7.7 13.2 5.6 15.3 9.8 15.2 8.0 7.5	10.2 4.9 9.5	6.4 14.6 10.6 14.5 7.0	Hahn's Peak Yampa River  Buffalo Pass Columbine Lodge(B) Dry Lake Lynx Pass (B) Rabbit Ears Yampa View  White River Burro Mountain	2/26 2/25 2/26 2/25 2/26 2/26 2/27 2/26 2/27	56 49 116 71 67 36 78 54 49	40.9 23.5 22.0 9.3 25.9 17.1	9.3 29.8 16.1 16.3 10.1 19.5	20.4 17.8 10.5 21.8 13.0

#### APPENDIX II

#### SOIL MOISTURE MEASUREMENTS as of March 1, 1974

STATION	DATE OF SURVEY	CAPACITY (INCHES)	THIS YEAR	LAST YEAR	AV AL DA
NORTH PLATTE BASIN					
North Platte River					
Muddy Pass Willow Pass	11/14/73 11/20/73	11.1 9.5	8.5 6.1	7.7 7.5	
SOUTH PLATTE BASIN					
Boulder Creek					
Alpine Camp	10/19/73	6.9	3.1	3.1	
Big Thompson River					
Beaver Dam Guard Station Two Mile	10/19/73 10/19/73 10/19/73	7.1 6.9 9.1	3.3 2.9 4.5	4.5 3.2 5.3	
Clear Creek					
Clear Creek Hoop Creek	11/26/73 10/18/73	9.5 4.9	7.1 2.4	7.1 2.8	
Cache La Poudre River					
Feather Laramie Road	12/13/73 10/17/73	10.1 12.4	5.1 7.4	4.5 6.9	
South Platte River					
Hoosier Pass Kenosha Pass	9/27/73 9/27/73	7.8 4.4	5.5 3.3	5.5 3.3	
ARKANSAS BASIN					
Arkansas River					
Garfield Leadville Twin Lakes Tunnel	10/19/73 10/18/73 10/18/73	6.7 7.8 4.5	5.2 4.1 2.2	5.0 4.0 2.4	
RIO GRANDE BASIN - COLORADO					
Conejos River				1	
Mogote	11/12/73	10.7	4.7	4.6	
Rio Grande					
Bristol View La Veta	11/12/73 10/29/73	6.1 11.9	2.3 6.4	4.1 6.9	
RIO GRAND BASIN - NEW MEXICO					
Rio Chama					
Bateman Chamita	10/23/73 10/23/73	6.7 8.0	2.7 4.4	2.6 1.5	
Rio Grande					
Aqua Piedra Big Tesuque Rio En Medio Taos Canyon	2/26/74 10/15/73 10/15/73 2/26/74	7.2 3.7 3.5 3.3	5.2 2.0 1.6 2.1	5.2 3.0 2.1 2.2	
Red River					
Red River Summit	2/25/74	4.8	1.5	1.5	

ALL PROFILES 4 FEET DEEP

#### APPENDIX II

#### SOIL MOISTURE MEASUREMENTS as of March 1, 1974

Mineral Creek Molas Lake    12/10/73   5.7   2.9   3.2     10/25/73   9.4   7.1   5.8     Dolores River    Dolores Lizard Head   11/15/73   19.6   1.2   4.1     Rico   11/15/73   11.8   1.2   4.1     Rico   11/15/73   13.8   1.4   9.3     GUNNISON BASIN     Gunnison River	STATION	DATE OF SURVEY	(INCHES)	THIS YEAR	LAST YEAR	AL DA
Animas River  Cascade Mineral Creek Mineral Creek Molas Lake  Dolores River  Dolores Lizard Head Rico  Gunnison Basin  Gunnison River  Blue River  Blue River  Berthoud Pass Gore Grand Mesa Ranch Creek Yanta Basin  Roaring Fork River  Placita  Yampa River  Cascade 10/25/73 9.1 3.8 7.2 9.1 3.8 7.2 9.3 3.2 11/10/73 19.6 2.0 11.4 11/5/73 11.8 1.2 4.1 11/5/73 11.8 1.2 4.1 11/5/73 11.8 1.2 4.1 11/05/73 13.8 1.4 9.3  Colorado River  Borthoud Pass Gore 11/120/73 4.9 2.4 3.1 11/20/73 4.9 2.4 3.1 11/26/73 12.3 7.1 6.9  Roaring Fork River  Placita  Yampa River						
Cascade   10/25/73   9.1   3.8   7.2   7.2   7.2   7.1   5.8   7.2   7.1   7.1   7.2   7.2   7.1   7.2   7.2   7.1   7.2   7	•					
Mineral Creek Molas Lake    12/10/73						
Dolores	Mineral Creek	12/10/73	5.7	2.9	3.2	6 3 4
Lizard Head Rico 11/05/73 11.8 1.2 4.1 9.3   GUNNISON BASIN	Dolores River					
Gunnison River         King       10/19/73       3.3       2.6       2.2         COLORADO BASIN (Mainstem)       9/27/73       4.2       3.3       3.2         Blue River       9/27/73       4.2       3.3       3.2         Colorado River       0 <td>Lizard Head</td> <td>11/05/73</td> <td>11.8</td> <td>1.2</td> <td>4.1</td> <td>7 6 9</td>	Lizard Head	11/05/73	11.8	1.2	4.1	7 6 9
King     10/19/73     3.3     2.6     2.2       COLORADO BASIN (Mainstem)     9/27/73     3.3     3.2       Blue River     9/27/73     4.2     3.3     3.2       Colorado River     10/18/73     3.9     3.2     3.2       Gore     11/20/73     4.9     2.4     3.1       Grand Mesa     10/23/73     12.5     11.3     12.3       Ranch Creek     10/19/73     8.7     4.9     5.4       Vail     11/26/73     12.3     7.1     6.9       Roaring Fork River     11/28/73     9.3     4.4     7.8       YAMPA BASIN     11/28/73     9.3     4.4     7.8	GUNNISON BASIN					
COLORADO BASIN (Mainstem)  Blue River  Blue River  Blue River  Berthoud Pass Gore Grand Mesa Ranch Creek Vail  Roaring Fork River  Placita  Pampa River  Placita  Pla	Gunnison River					
Blue River       9/27/73       4.2       3.3       3.2         Colorado River       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0 </td <td>King</td> <td>10/19/73</td> <td>3.3</td> <td>2.6</td> <td>2.2</td> <td>2</td>	King	10/19/73	3.3	2.6	2.2	2
Blue River    9/27/73	COLORADO BASIN (Mainstem)					
Colorado River         Berthoud Pass       10/18/73       3.9       3.2       3.2         Gore       11/20/73       4.9       2.4       3.1         Grand Mesa       10/23/73       12.5       11.3       12.3         Ranch Creek       10/19/73       8.7       4.9       5.4         Vail       11/26/73       12.3       7.1       6.9         Roaring Fork River         Placita       11/28/73       9.3       4.4       7.8         YAMPA BASIN         Yampa River	Blue River					
Berthoud Pass Gore Gore Grand Mesa Ranch Creek Vail  Roaring Fork River Placita  Yampa River  10/18/73 3.9 3.2 3.2 3.1 11/20/73 11/20/73 12.5 11.3 12.3 10/19/73 11/26/73 12.3 7.1 6.9  11/28/73 9.3 4.4 7.8	Blue River	9/27/73	4.2	3.3	3.2	2
Gore Grand Mesa Ranch Creek Vail  Roaring Fork River Placita  Yampa River  11/20/73 10/23/73 11.25 11.3 12.3 10/19/73 11/26/73 12.3 11/26/73 12.3 11/28/73 9.3 4.4 7.8	Colorado River					
Placita       11/28/73       9.3       4.4       7.8         YAMPA BASIN       Yampa River	Gore Grand Mesa Ranch Creek	11/20/73 10/23/73 10/19/73	4.9 12.5 8.7	2.4 11.3 4.9	3.1 12.3 5.4	10
YAMPA BASIN  Yampa River	Roaring Fork River					
Yampa River	Placita	11/28/73	9.3	4.4	7.8	5
	YAMPA BASIN					
Hahn's Peak 11/14/73 19.0 8.6 12.1	Yampa River					
	Hahn†s Peak	11/14/73	19.0	8.6	12.1	8

ALL PROFILES 4 FEET DEEP

#### LIST of COOPERATORS

The following organizations cooperate in snow surveys for the Colorado, Platte, Arkansas and Rio Grande watersheds. Many other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

STATE

Colorado State Engineer New Mexico State Engineer Nebraska State Engineer Colorado State University Experiment Station Rocky Mountain Forest and Range Experiment Station

#### FEDERAL

Department of Agriculture

Forest Service Soil Conservation Service

Department of Interior

Bureau of Reclamation Geological Survey National Park Service Indian Service

Department of Commerce

NOAA, National Weather Service

Defence Department

Army Engineer Corps

Atomic Energy Commission

INVESTOR OWNED UTILITIES

Colorado Public Service Company Public Service Company of New Mexico

MUNICIPALITIES

City of Denver City of Greeley
City of Boulder City of Fort Collins

WATER USERS ORGANIZATIONS

Arkansas Valley Ditch Association Colorado River Water Conservation District

IRRIGATION PROJECTS

Farmers Reservoir and Irrigation Company San Luis Valley Irrigation District Santa Maria Reservoir Company Costilla Land Company Uncompangre Valley Water Users' Association Twin Lakes Reservoir and Canal Company Trinchera Irrigation Co.

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE SNOW SURVEY UNIT

SNOW SURVEY UNIT P.O. BOX 17107 DENVER, COLORADO 80217

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300



# FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE

COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"